

Lowell Regional Wastewater Utility

Downstream Notification Report

NPDES Permit No: MA0100633

Date of Bypass/CSO Event:

Mon, Oct 9, 2017

Kevin Brander, Massachusetts DEP

Nihar Mohanty, Massachusetts DEP

Jeff Kennedy, Mass Division of Marine Fisheries

George Harding, United States EPA

Doug Koopman, United States EPA

Todd Borci, United States EPA

Aaron Fox, Lowell Regional Wastewater Utility

Mark Young, Lowell Regional Wastewater Utility

Tom Kawa, Lowell Regional Wastewater Utility

Mike Stuer, Lowell Regional Wastewater Utility

Rick Toohey, Lowell Regional Wastewater Utility

James McSurdy, Andover Water Treatment Plant

Dan DiNicola, Lawrence Water Department

Thomas Lannan, Methuen Water Treatment Plant

Lewis Zediana, Tewksbury Water Treatment Plant

Dear Plant Managers, Environmental Professionals, and Fellow LRWWU Employees:

This report describes untreated and/or partially treated wastewater discharges from the Lowell Regional Wastewater Utility (LRWWU) wastewater treatment plant and its associated Combined Sewer Overflow (CSO) diversion structures. Secondary treatment bypass refers to wastewater that enters the treatment plant, receives primary treatment, is blended with secondary effluent, disinfected, and then discharged to the Merrimack River. CSO diversions, which occur prior to the treatment plant at the CSO structures, are raw (untreated) discharges directly to nearby receiving waters. Bypass and diversion events are implemented when the capacity of the collection system and/or the treatment plant are exceeded. This is typically the result of heavy rain, but can also be necessary during times of excessive snow melt and/or ground water infiltration into the collection system.

Primary Influent Flow		
Daily Flow Rate (MGD)	Peak Hourly Flow Rate (MGD)	Instantaneous Peak Flow Rate (MGD)
32.11	85.49	92.12

Precipitation Duck Island WWTF			
Daily Total (in)	Duration Total (hr)	Average Intensity (in/hr)	Peak Intensity (in/hr)
0.39	10	0.04	0.15

Secondary Bypass	
Duration (Minutes)	Volume (MG)
187	4.21

CSO Diversion Totals	
Aggregate Duration (Minutes)	Volume (MG)
61	0.41

Person Reporting Event: Greg Coyle - LRWWU Engineer

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Secondary Bypass			
Time	Duration (Minutes)	Volume (MG)	Duck Island Rain (in)
01:00			
02:00			
03:00			
04:00			
05:00			
06:00			0.02
07:00			
08:00			0.01
09:00			
10:00			0.10
11:00	15	0.86	0.15
12:00	60	1.83	
13:00	45	1.17	
14:00	57	0.31	0.01
15:00			0.01
16:00			0.01
17:00			0.02
18:00			0.05
19:00			0.01
20:00			
21:00			
22:00	10	0.04	
23:00			
24:00			

Barasford Station To Merrimack River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Beaver Brook Station To Beaver Brook Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Secondary Bypass			
24 Hour	Total Duration (Minutes)	Total Volume (MG)	Total Rainfall (in)
	187	4.21	0.39

Barasford Station To Merrimack River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	0	

Beaver Brook Station To Beaver Brook		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	0	

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Merrimack Station To Merrimack River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Tilden Station To Merrimack River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00	23	0.05
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Walker Station To Merrimack River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Merrimack Station To Merrimack River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	0	

Tilden Station To Merrimack River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	23	0.05

Walker Station To Merrimack River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	0	

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Warren Station To Concord River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00	38	0.36
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

West Station To Merrimack River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Read Station To Merrimack River Diversion		
Time	Duration (Minutes)	Volume (MG)
01:00		
02:00		
03:00		
04:00		
05:00		
06:00		
07:00		
08:00		
09:00		
10:00		
11:00		
12:00		
13:00		
14:00		
15:00		
16:00		
17:00		
18:00		
19:00		
20:00		
21:00		
22:00		
23:00		
24:00		

Warren Station To Concord River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	38	0.36

West Station To Merrimack River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	0	

Read Station To Merrimack River		
24 Hour	Total Duration (Minutes)	Total Volume (MG)
	0	